CLAIMS:

1. A sensing circuit for sensing an electrical charge stored in a capacitor element comprising a charge integrator circuit arranged to receive an electrical charge from a capacitor element, and a discriminator circuit coupled in series with the charge integrator circuit, the discriminator circuit having a first input arranged to receive an output signal from the integrator circuit and a second input arranged to receive a reference voltage signal.

2. A sensing circuit according to claim 1, wherein the charge integrator circuit comprises an amplifier, a feedback capacitor coupled between an input terminal and an output terminal of the amplifier for storing electrical charge received from the capacitor element, first switching means coupled to one side of the feedback capacitor for connecting the said one side to a first electrical supply and second switching means coupled to the other side of the feedback capacitor for coupling the said other side to a further electrical supply.

3. A sensing circuit according to claim 1 or 2, wherein the discriminator circuit comprises a comparator circuit having a first input arranged to receive the output signal from the integrator circuit and a second input arranged to receive the reference voltage signal.

4. A sensing circuit according to claim 1 or 2, wherein the discriminator circuit comprises an inverter circuit arranged to provide an output signal which changes from a first level to a second level, which differs from the first level, when the magnitude of the output signal from the integrator circuit exceeds the reference voltage signal.

5. A sensing circuit according to any one of the preceding claims, comprising an enable circuit arranged to receive an output signal from the discriminator circuit on a first input and to provide an output signal indicative of the electrical charge or the capacitor element in response to a further signal received on a second input.

6. A sensing circuit according to any one of the preceding claims, wherein the capacitor element comprises a ferroelectric capacitor, a ferroelectric gate transistor, a charge coupled device, or an electrode for storing electrical charge.

7. A biosensor comprising, a sensing circuit according to any one of claims 1 to 6, when the capacitor element comprises an electrode for storing electrical charge.

8. A biosensor according to claim 7 comprising a DNA sensor.

9. A biosensor according to claim 7 comprising a fingerprint sensor.

10. A method of operating a sensing circuit comprising a charge integrator circuit, coupled in series with a discriminator circuit and arranged to receive an electrical charge stored in a capacitor element of an array of capacitor elements each for storing an electrical charge, the method comprising applying a first pulse signal to the said capacitor element and to selected other capacitor elements in the array, applying a second pulse signal to the said capacitor element and to selected other capacitor elements in the array, applying third and fourth pulse signals to selected other capacitor elements in the array, the first, second, third and fourth pulse signals being arranged to cause the electrical charge stored in the said capacitor element to be transferred to the charge integrator circuit but not to cause charge stored in other capacitor elements to be transferred to the charge integrator circuit.

11. A method according to claim 10, wherein the second and third pulse signals are provided from a common signal source with one of the signals being provided via an inverter circuit.

12. A method according to claim 10 or 11, wherein the first pulse signal has a duration shorter than the second pulse signal.

13. A method according to any one of claims 10 to 12 wherein the capacitor elements are selected to comprise ferroelectric capacitor elements and the first and second pulse

signals are arranged to cause the said capacitor element to change from a first polarization state to a second polarization state to transfer the electrical charge to the charge integrator circuit.

14. A method according to any one of claims 10 to 13, wherein the charge integrator circuit is selected to comprise an amplifier having a feedback capacitor coupled between an input and an output of the amplifier, and providing first switching means for coupling one side of the feedback capacitor to a first electrical supply, and second switching means for coupling the other side of the feedback capacitor to a further electrical supply.

15. A method according to claim 14, wherein the first electrical supply is selected to be virtual ground and the further electrical supply is selected to be a positive supply voltage, and wherein the method comprises closing the first and second switching means so as to precharge an output terminal of the charge integrator circuit to the positive supply voltage prior to commencement of a sensing cycle.

16. A method according to any one of claims 10 to 15, wherein the discriminator circuit is selected to comprise a comparator circuit having a first input arranged to receive an output signal from the charge integrator circuit and a second input arranged to receive a reference voltage signal.

17. A method according to any one of claims 10 to 16, wherein the discriminator circuit is selected to comprise an inverter circuit arranged to provide an output signal which changes from a first level to a second level less than the first level when the magnitude of an output signal from the integrator circuit exceeds a reference value.

18. A method according to any one of claims 10 to 17 comprising providing first switching means for selectively coupling an input of the charge integrator circuit to the capacitor element.

19. A method according to claim 18 comprising providing further switching means for coupling the first switching means to a bit line driver circuit.

20. A method according to any one of claims 10 to 19 comprising feeding an output signal from the discriminator circuit to a first input of an enable circuit and providing a further signal to a second input of the enable circuit, thereby to provide an output signal indicative of the electrical charge on the capacitor element in response to the further signal.

21. A method according to claim 20 when appendant to claim 13, comprising providing the further signal to the enable circuit during the application of the voltage pulse across the ferroelectric capacitor.